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ABSTRACT

A study sought to determine the incidence of Premenstrual Syndrome (PMS) and identify factors related to PMS among college women. Responses were received from a questionnaire sent to 293 subjects. Questions briefly touched upon life-style (taking the pill, having received a gynecological exam, amount of daily exercise and provided a checklist of symptoms: breast tenderness, weight gain, headaches, irritability, depression, and mood swings. Women exhibiting headaches, irritability, and depression were diagnosed as having PMS from a moderate to a severe degree. Findings indicated that almost all females report some type of premenstrual symptoms to some degree, and that a short educational course on PMS would be beneficial. Results of the questionnaire are displayed on tables categorizing the characteristics of the subjects and frequency of reports on different symptoms. (JD)

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FACTORS RELATED TO PREMENSTRUAL SYNDROME IN COLLEGE WOMEN[1]

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This study was concerned with Premenstrual Syndrome (PMS). During the last few years PMS has become a matter of controversy and is a major health problem for some women. Abplanalp (1983) has indicated that there seems to be no generally agreed upon definition of PMS. Problems in defining PMS result from (1) a lack of uniformity in the number and types of symptoms included in various definitions, (2) the question of onset and time course of symptoms, i.e. the term "premenstrual" seems to mean different things to different investigators and (3) there is some question as to whether there is one syndrome or several types of syndromes. To give you some idea how these discrepencies affect findings, various researchers (depending on how PMS was defined) have indicated the incidence of PMS among women of childbearing age to be as low as five percent and as high as one hundred percent. For the purposes of this presentation let me say that PMS can be defined in a very general way as "the predictable premenstrual appearance of distressing physical, psychological and behavioral changes."

Most of the research literature concerning PMS has been concerned with women who have presented themselves for treatment of PMS symptoms (Abplanalp, 1983, Goet and Abraham, 1983). Only a few researchers have utilized college age women in their work (Aberger, Denney and Hutchings, 1983). These studies report on the success of treatment, coping strategies or other work with PMS sufferers. Relatively little work as been done with "normal" populations. Hence, the present study dealing with a sample of college females.

The purpose of this study was to determine the incidence of PMS and identify factors related to PMS among college women. A questionnaire concerning PMS was completed by female students at the University of Arkansas. The students completing the questionnaire were from Personal Health and Safety classes, varsity swimming, track and basketball teams and two sororities.

Students in Personal Health and Safety completed the questionnaire in their regular classroom, sorority women completed the questionnaires at a regular meeting of their sorority and athletes completed the questionnaire during a regularly scheduled study hall.

The questionnaire completed by the subjects was designed to elicit information concerning PMS symptoms experienced by the subjects and additional information thought to be related to the development of PMS. Possible symptoms included in the questionnaire included breast tenderness, weight gain, headaches, irritability, depression and moodswings. Subjects self-rated the severity of monthly symptoms as none, slight, moderate or severe. All (100 percent) of the students who were asked to participate in the study decided to do so. This resulted in data from 293 subjects. Data were analyzed utilizing the SPSS programs "Frequencies" and "Crosstabs" (Nie, et.al., 1975).

RESULTS

Selected characteristics of the sample are shown in Table 1. Only a small number (17) of the women were over 25. All were classified as

INSERT Table 1
About Here

undergraduates. Less than 14 percent of those responding were taking the birth control pill. Three quarters of the subjects indicated having previously heard the term PMS. While more than half of the wome had, at one time or another, received a gynecological exam a substantial number had not. Only a small number of women reported having been treated by a physician for PMS but larger numbers reported regularly taking prescription or over the

counter medication to relieve premenstrual symptoms. The majority of the women had received at least some kind of menstrual education, but a number had not. Table 2 show the symptoms reported by the subjects by symptom type and severity. Relatively large numbers of women did experience one or more of the symptoms noted to a moderate or severe degree. In fact, while certainly not all women experienced all symptoms, only 9 women (3.1 percent) reported being symptom free.

INSERT Table 2
About Here

Table 3 show the results of the cross tabulation procedure. In this case severity of symptoms was not considered; simply did the subject exhibit the symptoms. The results indicate that:

(1) pill users were more likely to exhibit symptoms of breast tenderness and depression;

(2) females exhibiting breast tenderness, irritability and depression were more likely to have received a gynecological exam;

(3) with the exception of weight gain, symptoms were seen as severe enough to warrant a higher level of prescription drug use. For OTC drugs this was seen for all symptoms.

(4) Women who exercised frequently were less apt to report headaches as a PMS symptom.

(5) Women exhibiting headaches, irritability and depression may be diagnosed as having PMS. This did not seem to be the case for the other sypmtoms.

(6) Having heard of PMS was associated with the symptom of irritability.

Some people would perhaps say that those who have heard of PMS now have found an excuse to be irritable.

INSERT Table 3
About Here

Table 4 show the results of the same type of cross tabulation procedure. In this case subjects with no or slight symptoms were compared with subjects exhibiting moderate or severe symptoms.

(1) Again pill users were more likely to show symptoms of breast tendernesss.

(2) When symptoms were moderate to severe, in all symptom categories (except weight gain), women were more likely to have received a gynecological exam. Evidently many of the women in our sample did not feel the need to arrange for an exam, unless they perceived something to be wrong with them.

(3) Again, when symptoms were moderate to severe, women were more likely to rely on prescription and OTC medication, in all symptom categories except moodswings.

(4) Women who exercised regularly (3-4 times per week) were less likely to experience breast tenderness than both those women who exercise only

INSERT Table 4
About Here

infrequently and those who exercised on a daily basis (6 or 7 times per week).

(5) When women experienced moderate to severe symptoms, they were more apt

to be diagnosed by physicians as having PMS. This was true for all categories of symptoms except moodswings.

(6) Having heard of PMS was associated with moderate to severe symptoms of both irritability and headache.

As a result of our study it is possible to say the following concerning a population of college females:

1. Almost all females report some type of premenstrual symptoms;

2. A substantial number of women experience symptoms that they rate as moderate to severe.

3. Women experiencing symptoms generally feel that the symptoms are severe enough to warrant regular use of prescription and OTC medication.

4. A substantial number of college women have never received a gynecological exam. It may be that premenstrual symptoms may be a motivating factor in this area.

5. It seems that regular exercise may be of benefit relative to selected PMS symptoms.

6. PMS in college women is not frequently diagnosed by a physician. It is of course more likely to be diagnosed when moderate to severe symptoms are present. Moodswings do not seem to be a determining factor in such diagnosis.

7. Just because a women has heard of PMS does not seem to make it more likely that she will report PMS symptoms (two notable exceptions to this lack of association are headaches and irritability.)

As a result of this study information concerning PMS is now provided in Women's Health Issues. This is a new short course offered at no charge on our campus for the first time this fall and is being promoted on a campus wide basis.

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REFERENCE NOTES

[1]This paper was presented at the annual meeting of the American School Health Association in Pittsburgh, PA. October, 1984.

TABLE 1

SELECTED CHARACTERISTICS OF SAMPLE

AGE		CLASS		PILL	
18-25	276(93.9%)	Fr. 91(31.3%)	Jr. 68 (23.4%)	Yes	40(13.9%)
26-47	17(6.1%)	So. 72(24.7%)	Sr. 60 (20.6%)	No	246(86.1%)
		MISSING-2		MISSING-7	

HEARD OF PMS		GYN. EXAM		TRT. FOR PMS		PRES. DRUG	
YES	219(75%)	YES	165(56.3%)	YES	24(8.2%)	YES	47(16.2%)
NO	73(25%)	NO	128(43.7%)	NO	268(91.8%)	NO	244(83.8%)
MISSING-1				MISSING-1		MISSING-1	

OTC DRUG		MENSTRUAL ED.	
YES	95(38.8%)	YES	239(81.8%)
NO	195(67.2%)	NO	53(18.2%)
MISSING-3		MISSING-1	

TABLE 2

TYPE AND SEVERITY OF SYMPTOMS

SYMPTOM TYPE	SEVERITY				
	NONE	SLIGHT	MODERATE	SEVERE	
BREAST TENDERNESS	87(30.9%)	135(47.9%)	54(19.1%)	6(2.1%)	11 MISSING
WEIGHT GAIN	34(12.0%)	152(53.5%)	87(30.6%)	11(3.9%)	9 MISSING
HEADACHES	81(29.1%)	114(41.0%)	68(24.5%)	15(5.4%)	15 MISSING
IRRITABILITY	99(35.5%)	91(32.6%)	65(23.3%)	24(8.6%)	14 MISSING
DEPRESSION	78(28.2%)	96(34.7%)	85(30.7%)	18(6.5%)	16 MISSING
MOOD SWINGS	43(15.5%)	101(36.3%)	106(38.1%)	28(10.1%)	15 MISSING

TABLE 3

RESULTS OF CROSS TABULATION-PMS SYMPTOMS VS. NO SYMPTOMS

RELATED VARIABLE		SYMPTOM TYPE					
		BREAST TENDERNESS	WEIGHT GAIN	HEAD-ACHES	IRRIT-ABILITY	DEPRES-SION	MOOD SWINGS
PILL	CHI. SQ.	6.602				9.519	
	PROBABILITY	0.010				0.023	
GYN. EXAM	CHI. SQ.	19.190			11.725	20.275	
	PROBABILITY	0.000			0.001	0.000	
PRES. DRUGS	CHI. SQ.	5.786		8.252	16.251	33.776	4.927
	PROBABILITY	0.016		0.004	0.000	0.000	0.026
OTC	CHI. SQ.	15.072	12.630	14.246	15.961	29.715	12.610
	PROBABILITY	0.000	0.000	0.000	0.000	0.000	0.000
EXER. FREQ.	CHI. SQ.			8.897			
	PROBABILITY			0.031			
PHYS. DIAG.	CHI. SQ.			7.249	10.319	46.531	
	PROBABILITY			0.007	0.001	0.000	
HEARD PMS	CHI. SQ.				6.974		
	PROBABILITY				0.008		

TABLE 4

RESULTS OF CROSS TABULATION

NO TO SLIGHT SYMPTOMS VS MODERATE TO SEVERE SYMPTOMS

RELATED VARIABLE		SYMPTOM TYPE					
		BREAST TENDERNESS	WEIGHT GAIN	HEAD-ACHES	IRRIT-ABILITY	DEPRES-SION	MOOD SWINGS
PILL	CHI. SQ.	6.195					
	PROBABILITY	0.013					
GYN. EXAM	CHI. SQ.	8.552		4.480	3.892	8.264	6.830
	PROBABILITY	0.004		0.028	0.049	0.004	0.009
PRES. DRUGS	CHI. SQ.	10.352	13.990	26.847	17.488	15.461	
	PROBABILITY	0.001	0.001	0.000	0.000	0.001	
OTC DRUGS	CHI. SQ.	8.560	26.702	12.982	17.466	8.862	
	PROBABILITY	0.003	0.000	0.000	0.000	0.003	
EX. FREQ.	CHI. SQ.	9.032					
	PROBABILITY	0.029					
PHYS. DIAG.	CHI. SQ.	21.370	13.485	20.137	11.287	10.050	
	PROBABILITY	0.001	0.000	0.000	0.001	0.002	
HEARD PMS	CHI. SQ.			5.603	4.520		
	PROBABILITY			0.017	0.034		